

METHOD FOR FABRICATING A SEMICONDUCTOR DEVICE

ABSTRACT OF THE DISCLOSURE

A method for fabricating a semiconductor device, including forming a gate
5 insulating film and a gate electrode film on a semiconductor substrate, and patterning the
gate electrode film to form a gate electrode. A portion of the gate insulating film is
removed to form an undercut region beneath the gate electrode. A buffer silicon film is
formed over an entire surface of the resultant substrate to cover the gate electrode and to
fill the undercut region. The buffer silicon film is selectively oxidized to form a buffer
10 silicon oxide film.